

1906.

TWICKENHAM
Urban District Council.

ANNUAL REPORT

OF

W. MARSTON CLARK,

Diplomate in Public Health, Lond.,

Medical Officer of Health.

Twickenham :

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1907.

THE HEALTH COMMITTEE

OF THE

Twickenham Urban District Council.

Councillor R. H. BATTEN, (*Chairman*).

„ T. CLARKE.

„ S. S. EARLE.

„ R. MORROW

„ W. J. PALMER.

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„ R. W. SWAKER.

„ E. WILKES-SMITH.

„ F. W. ALLISON, (*ex-officio*).

„ W. BATES, (*ex-officio*).

W. MARSTON CLARK, D.P.H., Lond.,

Medical Officer of Health.

A. G. KNIGHT,

Inspector of Nuisances.

F. DARLEY, Cert. San. Inst.,

Assistant Inspector of Nuisances.

ELIZABETH QUICK,

Matron at Infectious Diseases Hospital.

Twickenham Urban District Council.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

1906.

MR. CHAIRMAN AND GENTLEMEN,

I have the honour to submit to you my twenty-third Annual Report as to the Health and Sanitary condition of the Parish of Twickenham.

Appended to the Report are five tables received from the Local Government Board.

Table I comprises the vital statistics of the whole District for 1906, and previous years extending from 1896.

Table II consists of the Births and Deaths registered, and with a view to giving more concise information, such table has been sub-divided corresponding with the four Wards of the District, viz. :—South, East, West, and Central. I have estimated the population at 27,000, comprising 6,050 in the South Ward, 7,429 in the East Ward, 8,040 in the West Ward, and 5,481 in the Central Ward.

Table III shows the cases of Infectious Diseases notified during the past year. Of the total cases 28 were in the South, 36 in the East, 39 in the West, and 29 in the Central Wards respectively. The removals to the Infectious Diseases Hospital, were 14 from the South Ward, 28 from the East Ward, 17 from the West Ward, and 20 from the Central Ward.

Table IV. embraces the causes and ages at death for the same period. There were 373 deaths ; of these 69 occurred in the South Ward, 76 in the East Ward, 157 in the West Ward and 71 in the Central Ward.

Table V gives the Infantile Mortality sub-divided into weekly periods up to one year of age.

In addition to the foregoing, there are three tables furnished by the Middlesex County Council, viz. :—Tables I, II and III.

Table (I) refers to Inspections of Dwelling Houses, Houses let in separate Dwellings or Lodgings, Common Lodging Houses, Canal Boats used as Dwellings, Movable Dwellings, Caravans, Tents, &c., Workshops and Workplaces, Inspections generally, and notices served.

Table (II) contains the Inspection of Laundries, Bake-houses, Slaughter-houses, Cowsheds, Dairies and Milkshops, Unsound Food, Adulterated Food, Offensive Trades, Water Supply, and Water Service.

Table (III) relates to Water Closet accommodation, Drains, Cesspools, Disinfection, Dust Collecting, and sundry other Nuisances, such as overcrowding, smoke, &c., &c.

The compilation of the various tables has necessitated very great care and considerable time.

Population.

The Vital Statistics are calculated on an estimated population of 27,000. The population at the time of the Census of 1891 was 16,026, and at the Census of 1901, 20,991.

If the population per house remains the same as in 1901 the population is in excess of the number mentioned. This estimate cannot however be given with any amount of confidence, and it is to be regretted that the Local Government Board has not arranged for a quinquennial census in order that the vital statistics might be prepared with greater accuracy.

Births.

During the year there were 811 births, 415 were males, and 396 females, giving a birth rate of 30·03 per 1000.

The total number of births for 1901	was	576
„	1902	596
„	1903	615
„	1904	723
„	1905	713

The births were distributed as follows :—

South Ward...	...	...	134
Central „	...	...	142
East „	...	...	180
West „	...	..	355

Deaths.

With an estimated increase of population since the Census of 1901, the number of deaths, 334, is an increase of 33 above last year. The death rate is at the average of 12·3 per 1,000 as against 11·5 per 1,000 in the preceding year.

The number of deaths for—

1901	was	254	equal to an average rate of	12·9	per 1000
1902	„	264	„	12·0	„
1903	„	254	„	10·5	„
1904	„	324	„	12·2	„
1905	„	334	„	12·3	„

The epitome of ages at death is as follows :—

Under 1 year	...	...	...	109
Over 1 year and under 5 years	...	...	47	
Over 5 years and under 15 years	...	...	11	
Over 15 years and under 25 years	...	...	18	
Over 25 years and under 65 years	...	...	112	
65 years and upwards	...	..	76	

The deaths in the various Wards were as follows :—

South Ward...	...	...	69
Central „	...	...	71
East „	...	...	76
West „	...	...	157

Of the deaths registered in the District and as occurring among the residents in Twickenham, 62 exceeded 65 years of age.

11 were between the age of 65 and 70 years.

27	„	„	70	„	80	„
22	„	„	80	„	90	„

Two died at the advanced age of 90 and 95 years respectively.

Three uncertified deaths were recorded, alleged to have been due to diarrhœal disease, convulsions and heart disease respectively.

Amongst the deaths from all causes were 45 from Diarrhœa, 14 other diarrhœal diseases, 31 from Phthisis, 11 from other forms of tuberculosis, 23 from Cancer, 9 from Respiratory Diseases, 19 from Heart Disease, 20 from Accidents, and 16 Premature Births.

Forty-four deaths of residents occurred outside the District in the undermentioned places :—

Seamen's Hospital	...	...	...	2
Isleworth Infirmary	...	...	...	29
Richmond Hospital	...	...	...	6
St. George's Hospital	...	...	...	1
Wandsworth Asylum	...	...	...	3
Kingston Infirmary	...	...	...	1
Surbiton Hospital	...	...	...	1
Wandsworth (in the street)	...	...	...	1

Five deaths of non-residents occurred within the District.

Infantile Mortality.

As previously recorded the total number of deaths of children under one year of age was 109. Of these fourteen occurred under one week, two between one week and two weeks, five between two and three weeks, and five between three and four weeks, a total under one month of twenty-six. Fifteen occurred between one month and two months, nine between two and three months, six between three and four months, nine between four and five months, eight between five and six months, four between six and seven months, eleven between seven and eight months, ten between eight and nine months, five between

nine and ten months, five between ten and eleven months, and one between eleven and twelve months. Included in the above figures are sixteen premature births. The Infantile Mortality is equal to 13.4 per centage of births. This is an increase on the rate of the previous year.

The yearly variations in the infantile mortality are frequently largely due to the variations in the number of deaths from diarrhoeal diseases.

Eleven deaths took place in St. John's Hospital, seven in the Nightingale Nursing Home, three in the married quarters of the Royal Military School of Music, Kneller Hall, and two in the Council's Infectious Diseases Hospital.

The following Table summarises the Mortality from the principal Zymotic diseases happening during the last 10 years :—

	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
Small Pox	0	0	0	0	0	1	0	0	0	0
Measles	0	15	0	8	2	8	1	2	0	13
Scarlet Fever... ..	0	1	2	0	3	1	1	1	0	1
Diphtheria	4	2	6	3	3	3	3	2	1	3
Whooping Cough ...	8	9	3	7	9	9	10	13	6	3
Enteric Fever	2	0	0	1	2	0	0	2	1	0
	14	27	11	19	19	22	15	20	8	20

Measles.

By reason of an epidemic I had occasion to recommend the closing of two of the Schools during the year under review, viz :— Archdeacon Cambridge (Infants' Department), and Whitton, Church of England (Infants' Department).

During the year I have seen no reason to modify my opinion that school closure is rarely of much, if of any, avail in combating an epidemic of measles.

Small Pox.

The District remained free from this disease during 1906.

Whooping Cough.

This disease accounted for three deaths, all of which were under 5 years of age, and each case was attended by some lung complication.

Notifiable Diseases.

Subjoined is a Table of the scheduled Notifiable Diseases, with the number of cases occurring in each year for the past ten years.

	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906
Small Pox	0	0	0	0	0	10	0	0	0	0
Scarlet Fever	34	31	142	97	105	57	23	101	41	82
Diphtheria and Membranous Croup ...	20	19	29	27	31	12	18	30	10	25
Typhus Fever	0	0	0	0	0	0	0	0	0	0
Enteric or Typhoid Fever	11	6	9	6	9	9	3	7	2	6
Continued Fever	0	1	1	7	2	0	0	0	1	0
Relapsing Fever	0	0	0	0	0	0	0	0	0	0
Puerperal Fever	4	0	0	4	2	2	0	2	5	2
Cholera	1	0	2	0	0	0	0	0	0	0
Erysipelas	7	8	11	12	10	4	4	8	11	17
	77	65	194	153	159	94	48	148	70	132

This return shews an increase in comparison with the previous year.

Scarlet Fever.

There were 82 cases of Scarlet Fever notified ; of these 15 took place in the South Ward, 30 in the East Ward, 19 in the West Ward, and 18 in the Central Ward.

Infectious Diseases Hospital.

Seventy-seven cases of Scarlet Fever were admitted into the temporary Hospital, the Council still continuing their tenancy of this building.

Of the 77 cases, 17 were removed from the West, 18 from the Central, 28 from the East, and 14 from the South Wards respectively. Nurse Quick continued to perform her duties efficiently, to the satisfaction of myself and, to the best of my belief, of all the other medical practioners who had occasion to attend at the Hospital. The parents of the children who were under treatment expressed their gratitude for the experienced services rendered.

Owing to a rather large influx of cases during the end of November and the beginning of December, particularly of very young children, it was necessary to procure additional assistance. I regret to record that two deaths occurred.

The plans prepared by the Surveyor for the erection of the new Isolation Hospital on the land at Whitton, acquired by the Council for this purpose, were approved at the Council Meeting held on the 25th October, and it is hoped that the buildings will be completed during the ensuing year. The accommodation proposed to be provided is in accordance with the requirements set out in my last Annual Report, and comprises administrative block, ward block, isolation block, and laundry and ambulance block.

The administrative block will contain on the ground floor, doctor's and matron's rooms, nurses' sitting room, kitchen, scullery, store rooms, larder, coal store, lavatory and w.c.'s, and on the first floor, bedrooms for nine persons, linen stores, bath-room and lavatory.

The ward block, which is intended entirely for scarlet fever cases, will be divided into separate wards, and provides accommodation for sixteen beds with a nurses' duty room between the wards, and lavatory and w.c. accommodation at the end of each ward. A convalescent ward, which can also be used when required as a children's ward of six cots, will also be provided on the first floor.

In the ward blocks, each bed will have twelve lineal feet wall space, one hundred and forty-four square feet floor space, and two thousand cubic feet air space. These dimensions are identical with those prescribed by the Local Government Board for the erection of similar buildings.

The isolation block will also be divided into two wards with accommodation for two beds in each ward and a nurses' duty room and bathroom between the two wards. The lavatory and w.c. accommodation will be placed in a separate building under a verandah on one side of the block.

The laundry and ambulance block will contain a small engine and boiler room, washhouse, ironing room, ambulance station, coal store and mortuary. Space will also be provided for the installation of disinfecting apparatus when required.

Provision is also made for the erection of a caretaker's lodge, and a receiving and discharging block when required, and ample space exists on the site for the erection of additional ward pavilions at any time when the future requirements of the district necessitate this being done.

The buildings will be connected with the sewerage system of the district, and supplied with water from the Metropolitan Water Board's service.

Diphtheria.

The number of cases notified amounted to 25 as compared with 10 in the preceding year. Two cases terminated fatally. These were evenly distributed throughout the district. The method of dealing with the diseases was substantially the same as in previous years. The examination gratis of swabs taken from the affected part and the free distribution of Anti-Diphtheritic Serum and the use thereof undoubtedly had the effect of deterring the spread of the disease and effecting cures.

Inquests.

During the past year 25 inquests have been held. The findings of the juries were as follows :—

3	Heart Disease.	
10	Accidental.	2 suffocated in bed.
	„	2 killed by passing train.
	„	1 scalding.
	„	1 killed by tramcar.
	„	3 drowning.
	„	1 asphyxia.
1	Cancer.	
1	Diarrhœa.	
1	Malnutrition.	
1	Inanition.	
1	Apoplexy.	
2	Suicides by drowning.	
1	„	shooting.
2	„	poison.
1	„	cut throat.
1	„	hanging.

There were 12 post mortem examinations performed at the mortuary out of 25 bodies which were received therein.

Water Supply and Analyses.

Five samples of water drawn from wells were analysed and all were found to be good, and fit for drinking purposes. Two samples of water were taken from the out-fall of the lake in the Kneller Hall Park and the same found to be free from sewage contamination. Two samples taken from the River Crane were found to be of a satisfactory character.

I have received from the Metropolitan Water Board monthly reports on the results of the Chemical and Bacteriological examination of the samples taken from the late Grand Junction Water Works sources which supply the District.

Factory and Workshop Act, 1901.

Factories. For the most part the law relating to Factories is administered by the Home Office.

The total number of workshops as per register was 91, including domestic workshops, retail bakehouses, laundries, and other workshops and workplaces.

Bakehouses.

These have been regularly inspected and cleansed. At the end of the year there were 19 bakehouses in occupation, of which three were underground and have been certified. The underground bakehouse mentioned in my last report has become disused by reason of the erection of new and more suitable premises.

Inspection of the Parish.

Over 5,700 houses, premises, &c., have been inspected and re-inspected.

The following is an analysis of the work accomplished :—

Houses, premises, &c., cleansed, repaired, whitewashed, &c.	220
„ roofs repaired, &c.	61
„ gutterings and rain pipes repaired, &c....	48
„ ventilation below floor provided	26
„ yards, paved, drained, repaired, &c.	73
Accumulations of manure removed	30
Urinals enlarged and repaired	3
Nuisances arising from overcrowding	15
„ „ smoke	3
„ „ pigs, other animals, and fowls	9
Other nuisances not included in the above	182
<i>Water</i> —Wells closed	1
Laid on to houses with no supply	0
<i>Cisterns</i> —New provided	21
Cleansed, repaired, covered, &c.	83
Flush to W.C.'s	76
<i>Water-Closets</i> —New constructed	18
New apparatus provided	44
Repaired, cleansed, &c.	120
Supply with water or supply rendered efficient	97
Ventilated	26
D traps and containers abolished	8
<i>Fish Curing</i> —Discontinued... ..	0
<i>Privy</i> —Abolished... ..	0
<i>Stables</i> —Impervious paving provided... ..	0

<i>Unsound Food</i> —Articles seized	...	...	...	0
<i>Disinfection</i> —Rooms fumigated	...	..	...	120
Stripped and cleansed, per notice			...	19
<i>Drains</i> —Examined, tested, exposed, &c.	...	...	...	25
Unstopped, repaired, trapped, &c.	...	...	...	132
Waste pipes, rain pipes, &c., disconnected	...		...	48
Soil pipes and drains ventilated	...	...	...	26
Disconnecting traps and chambers inserted	...		...	15
Reconstructed	...	...	...	21
Cesspools filled in	...	..	...	1
„ cleaned out	..	...	...	0
Gullies fixed in lieu of “ Bell Traps ”	...	...	...	17
<i>Dust</i> —Number of complaints of non-removal	...	...	...	61
Bins repaired	...	...	...	0
New dustbins provided	...	...	...	73
Movable receptacles substituted for fixed	...		...	47
Sanitary orders issued	...	...	...	410

In addition to the foregoing, repeated inspections were made and works of whitewashing and cleansing executed in the following buildings :-

Laundries	...	...	...	48
Slaughter houses	...	...	...	10
Dairies and milkshops	...	...	...	40
Workshops and workplaces	...	...	...	175
Bakehouses	...	...	...	19
Cowsheds	...	...	...	6

Dust or House Refuse.

During the greater portion of the year the weekly collection of the house refuse has been made by the Council instead of by Contract. A considerable diminution in the number of complaints resulted and general satisfaction was given.

Back Yards.

The Council's attention was directed to the damp and unsatisfactory state of the surface of the yards in the rear of a large number of small houses in the District, and the advisability of framing Bye-laws enabling the Council to deal with existing and future cases. This course has been determined upon.

Dairies, Cowsheds, and Milkshops Orders.

Applications were received for the registration of certain persons for the sale of milk and the registrations were made. Upon examination of the premises it was found in one instance that the conditions generally were unfit and the sale was discontinued, whilst in other cases suggested alterations and improvements were effected. The whole of the cowsheds, dairies and milkshops were frequently inspected and works of cleansing were carried out where necessary.

Housing of the Working Classes Acts.

A house to house inspection was made of the following streets :—Milford Road, St. Margaret's Grove, Orleans Road, First Cross Road, Second Cross Road, Third Cross Road, Fifth Cross Road, Grove Road, Athelstan Road, Marsh Farm Road, Bell Lane, Norcutt Road, Alfgar Road, Crane Road, Gould Road, Mereway Road, Denmark Road and Bedford Road. Where nuisances or defects were found to exist, notices to abate the causes of complaint, were served and complied with without recourse to legal proceedings.

The satisfactory results thus attained are in great measure due to the procedure adopted by the Health Committee in causing letters in the first instance to be addressed to owners of property drawing their attention to the existing defects.

The Education Acts.

The public elementary schools in the District have on several occasions been visited. Important improvements have been effected in some of the sanitary conveniences, and a better water supply afforded for all purposes. The ventilation and lighting of some of the buildings have been remodelled and brought up to a higher standard of efficiency. There are other schools which still require similar attention.

St. Mary's Schools. The latrines and outbuildings were lime-whited throughout and the internal painted wood-work including doors and divisions was washed and cleaned down.

Archdeacon Cambridge's Schools. These buildings were painted and distempered throughout and improvements effected.

The latrines at the Infants' Department were lime-whited throughout, and the urinal slabs and closet troughs were thoroughly cleansed.

St. James' R.C. Schools. The internal walls and latrines and outbuildings were lime-whited.

The Schools generally are in a very satisfactory state.

Overcrowding.

Considerable difficulty was experienced in detecting breaches of the law in this respect. In some instances the Sanitary Inspectors have had premises under observation in the early hours of the morning and late at night in order to detect the actual number of persons sleeping therein. Notices were served and the nuisances abated.

In fifteen cases it was necessary to serve statutory notices for the abatement of this nuisance. The detection of the actual number of persons inhabiting a dwelling house entailed frequent observations and great discrimination in collecting facts in order to enable the Council to take necessary steps in the matter.

Unemployed Workmen.

Arrangements were made for a register of Unemployed Workmen in Twickenham to be opened at the Council's Depot, commencing on the 26th November last. On the 7th December last 147 applications for employment had been received.

The Surveyor to the Council engaged twenty-three men for the first three days in the week before Christmas in scavenging the principal thoroughfares in the District. At subsequent dates twenty-nine applicants were further engaged.

An application for a contribution towards the cost of finding work for the Unemployed in the District was made to the President of the Local Government Board who replied that the grant voted by Parliament was in aid of the expenses of the Authorities by whom the Unemployed Workmen Act, 1905, was administered, and that a grant could not be made to Twickenham.

By reason of the steps taken by the Council and the voluntary subscriptions received and distributed amongst the recognised organisations, the prevailing distress appeared to be somewhat alleviated.

Diseases of Animals Acts.

I am pleased to be able to report that no notification of any disease was received.

The Customs and Inland Revenue Act.

Under section 26 of 53 and 54, Vic. c. 8, exemption from the Inhabited House Duty is granted to houses divided into tenements of the annual value of less than £20, provided the Medical Officer of Health certifies that they afford suitable accommodation for each of the families or persons in respect of their sanitary arrangements. By section 11, 3 Ed. VII. this provision was extended to houses of the annual value of not more than £40. During the year applications were received in respect of the following flats.—

- Nos. 1—10, Richmond Terrace, Richmond Road.
- No. 31, The Broadway.
- No. 22, Cresswell Road.

An inspection in each case was made but no certificate was granted.

Water Courses.

The attention of the Middlesex County Council was directed to the condition of the stream forming part of the boundary of the parish separating it from the Heston and Isleworth District, and also the War Office Authorities, to the outfall of the lake in Kneller Hall grounds. Both were cleaned out and improved.

The Teddington Urban District Council, the London United Tramways (1901) Ltd., and the Middlesex County Council were informed of the pollution of the stream, which enters this parish from the above-mentioned district. There was considerable difficulty in coping with the matter, but eventually the nuisance which existed was mitigated. The River Crane (near Cole's Bridge) was cleansed.

Buildings and Sewers.

I am indebted to the courtesy of the Surveyor to the Council for the following particulars :—

Plans of houses approved (excluding those known to be abandoned)	177
Plans for alterations and additions to existing buildings	14
Houses connected to soil sewers	125
Houses connected to surface water sewers ...	116

New Streets and Sewers.

The following new streets have been made up under the provisions of the Private Street Works Act, 1892 :—Grove Avenue, Athelstan Road and Southfield Gardens.

The number of yards of new sewers constructed	1096
Number of yards of surface water sewers constructed	690
New manholes constructed	28

Snow Removal.

The first fall of snow took place on the 26th December last and was of a depth of about four inches. Further falls took place on the 27th, 28th, 29th and 31st of the same month. In addition to the works of cleansing of the streets and carting away the snow, the rapid alterations of thaw and frost necessitated heavier amount of work in connection with the sanding of the roads and footpaths, thereby materially assisting pedestrians and horses.

I understand that the total amount of snow cleaned and carted away amounted to 2175 loads or about 3210 cubic yards, and the total cost in connection with such cleaning and removal amounted to £239 2s. 9d.

Consumption.

Upon reference to Table IV, column 1, attached to this report, it will be observed that 42 deaths occurred, mainly or partially due to this disease.

It is only fitting that I should include in my report some reference to this important subject. My remarks must be somewhat limited, and confined principally to a general survey of the question from a 1907 point of view, and thus enabling you to draw from it certain deductions.

I desire that you should in the first place realise what is Tuberculosis? Shortly, *It is the most widespread and destructive of infectious diseases.* The healthy take it from the sick, just as they take small-pox, with this difference, that there is a means of preventing small-pox, namely, vaccination, whilst no means yet have been discovered for warding off the attack of tuberculosis. Moreover, tuberculosis is all the more dangerous because it usually develops so slowly that its infectious nature is overlooked. No part of the body is spared by tuberculosis, but the part frequently attacked is the lung. Tuberculosis of the lung is called "phthisis," or "pulmonary consumption." Tuberculosis is, therefore, one of the most potent influences for evil in this country, tending as it does to destroy the health, happiness, and life of so many people.

Only twenty years ago tuberculosis, even in its most dangerous form, pulmonary phthisis, was not considered infectious. By the labours of the experimental investigations of certain eminent men proofs have already been given that this view was erroneous. But it was not till the tubercle bacillus was discovered that the etiology of tuberculosis was placed on a sure foundation, and the conviction gained that it is not only a parasitic—*i.e.*, an infectious—but also an avoidable disease.

What is the cause of Tuberculosis? It is caused by a living organism called the "tubercle bacillus," far too small to be seen by the unaided eye. The bacillus multiplies in the body, and destroys various organs, especially the lungs. It is eliminated from the body chiefly in the matter called "sputum," phlegm, or "spit," which is so abundantly coughed up by consumptives. This tiny disease-germ is hard to kill. We know of no way of killing it *inside* the body, because anything that would do so would kill the patient also. *Outside* the body it can be killed by various chemicals called "disinfectants," such as cyllin, lysol, carbolic acid, formalin, &c. The best and cheapest way of killing the bacillus outside the body is by *moist heat*, that is, boiling or steaming.

Professor Robert Koch, at the International Medical Congress, held in London, 1900, upon this question, stated that the testing of the investigations which had been carried out at Berlin with the utmost care and broad basis, led him to the confirmation of his previous opinion, that the harmlessness of the bacilli of bovine tuberculosis had been directly proved by the repeated inoculation of human beings with the material of bovine tuberculosis, with the result that human tuberculosis and bovine tuberculosis were different from one another, *and that bovine tuberculosis was not transmissible to men.*

The essential facts regarding infection in tuberculosis are these. Patients with closed tuberculosis may be regarded as quite harmless. Even those who suffer from open tuberculosis are harmless so long as the tubercle bacilli expelled by them are prevented by cleanliness, airing, &c., from infecting. The patient becomes dangerous only when he is personally uncleanly or becomes so helpless in consequence of the far advanced disease that he can no longer see to the suitable removal of the sputa. For the healthy the danger of infection increases with the impossibility of avoiding the immediate neighbourhood of a dangerous patient—*i.e.*, in densely inhabited rooms, especially if the latter are not only overcrowded but also badly ventilated and inadequately lighted.

Tuberculosis is spread by the germs being inhaled. The sputum of consumptives is dried up, and becomes mingled with the dust, and the germs are either breathed into the lungs or swallowed, and give rise to consumption. The persons who are most susceptible are children and persons inheriting weakness of constitution, and those parties who spend much of their time in ill-ventilated and dirty premises; also those who sleep in overcrowded and inadequately ventilated rooms. For an individual to contract tuberculosis three things are necessary. There must be the lurking bacilli; the implantation of the bacilli; and the suitability of the individual for the cultivation of the implanted bacilli.

The spreading of consumption was on the growth and attendant by such fatal results that in 1901 His Majesty the King

deemed it expedient that a Commission should forthwith be appointed to enquire and report with respect to Tuberculosis :—

- 1.—Whether the disease in animals and man is one and the same.
- 2.—Whether animals and man can be reciprocally infected with it.
- 3.—Under what conditions, if at all, the transmission of the disease from animals to man takes place, and what are the circumstances favourable to or unfavourable to such transmission.

The Commissioners found *that man is liable to infection by bovine tuberculosis, and added, that cows' milk, containing tuberculous bacilli, is responsible for the majority of cases of such infection.*

Briefly, the conclusions the Commissioners arrived at were that there was no doubt but that in a certain number of cases the tuberculosis occurring in the human subject, especially in children, is the direct result of the introduction into the human body of the bacillus of bovine tuberculosis; and there can also be no doubt that in the majority at least of these cases the bacillus is introduced through cows' milk. A very considerable amount of disease and loss of life, especially among the young, must be attributed to the consumption of cows' milk, containing tubercle bacilli. The presence of tubercle bacilli in cows' milk can be detected, though with some difficulty, if the proper means be adopted, and such milk ought never to be used as food. There is far less difficulty in recognising clinically that a cow is suffering from tuberculosis, in which case she may be yielding tuberculous milk. The milk coming from such a cow ought not to form part of human food, and indeed ought not to be used as food at all. The results point clearly to the necessity of measures more stringent than those at present enforced being taken to prevent the sale or the consumption of such milk.

It would not be easy to over-estimate the importance of the work already accomplished by the Commissioners. They have succeeded beyond all expectations in solving two-thirds at least of the problems set in their reference, and have demonstrated conclusively that Koch's "ex cathedra" utterance of 1900 was based on insufficient and misinterpreted observation.

The sufferers from pulmonary consumption may be divided roughly into three classes, which have to be dealt with separately. (1) The advanced cases unfit for work and mostly confined to the house. (2) Patients not yet seriously ill ; able, perhaps, to work or attend to business or household duties, going about in railway carriages and public vehicles, mixing freely with the general population, frequenting public houses, places of entertainment, hotels, lodging houses. (3) Those in quite an early stage, coughing much, perhaps, but spitting little, capable of all the ordinary duties of life.

The first item in the programme of prevention will be to ascertain how many cases of each of these groups there are in a given area, and where they are.

The question now arises how can the disease be prevented? This may be effected by notification. Voluntary notification has been in operation in eighteen out of the twenty-nine London boroughs ; and in Manchester, Liverpool, Brighton, and many other towns, and has been most successful in its operation. It is compulsory in Sheffield ; but so large a proportion of the existing cases are brought to light without compulsion, a measure which may be regarded by some as extreme, that notification need be obligatory only on Poor Law Medical Officers, and perhaps on hospitals and dispensaries.

Persons should provide for the safe removal of sputum. Patients who are confined to their beds should spit into convenient vessels, and the contents should be poured on to the fire, and the vessel cleansed out in boiling water. Consumptives walking about should use a sputum flask, or a pocket handkerchief, provided it is dropped into boiling water when done with, and not allowed to dry in the pocket. Floors should be moistened before being swept.

The examination by a veterinary surgeon of milch cows in the district, with a view to the discovery of any which might be suffering from tuberculous disease of the udder, and also the testing of milk, are matters of great importance. The Local Government Board in 1899 expressed the view that under the Dairies, Cowsheds and Milkshops Orders 1885, 1886 and 1889 or one of them that "it would be competent for a Council to employ and pay a "veterinary surgeon with a view to obtaining a certificate under "the above order or to appoint him as an officer for this purpose "if the Council thought fit to do so."

The Council have taken no steps in the matter, or in other words have let it go by default, presumably by reason of the undecided opinion which prevailed amongst learned professors, who devoted their attention to the subject. Now however, as the Royal Commissioners have established the fact that bovine tuberculosis is communicable to human beings through milk, the important question arises whether a veterinary surgeon should be appointed to examine the milch cows throughout the district, and also submit samples of milk for analysis where doubt arises?

Cases in which, from the character of the dwellings and surroundings, and, it must be added, of the patient and family, no regulation of isolation could be carried out, would be removed to infirmaries or institutions specially provided; and it is very desirable that the stigma of pauperism should not be added to the sting of poverty by such removal, since this is for the protection of the community, and not merely for the benefit of the patient, though it would add to his comfort, and prolong his life. The segregation and isolation of advanced cases may be recommended with greater confidence from the fact that the statistical investigations of Dr. Newsholme have shown that the greater diminution in the death-rate from consumption in this country, as compared with France and Ireland, has probably been in large measure due to the isolation effected by the reception of so many advanced cases into workhouse infirmaries as well as to the sanitary measures which Local Authorities have carried out.

For the early, and probably curable, cases, Sanatoria are most desirable, but this requires much time and money; and meanwhile, for the protection of the community, the effective supervision of cases sufficiently advanced to be giving off large numbers of the specific microbes will be more important.

Suggestions by which preventative measures may best be carried out may shortly be summarised as follows:—

- (a) Voluntary notification.
- (b) The examination of milch cows by a veterinary surgeon, and the testing of milk.
- (c) The provision of spittoons and flasks to be used as pocket spittoons.
- (d) The distribution of leaflets.

- (e) Simple instruction in the elementary schools.
- (f) Disinfection of Houses.

Generally.

In conclusion, I have to observe that, from a sanitary point of view, the parish has maintained its good position. The work which has devolved upon the Inspectors of Nuisances, has been carried out I believe to the satisfaction of the Health Committee.

I feel it must be recognised by the Council from this Report alone, that, owing to the rapid and continued growth of the district, coupled with the fact the increase has been in houses of small description, the duties in connection with the Sanitary Department have materially increased, and the responsibilities devolving upon me grow more onerous year by year.

I cordially thank the Health Committee for the valuable assistance and encouragement which has from time to time been given, and also for the confidence which has been reposed in me.

I have the honour to be,

Mr. Chairman and Gentlemen,

Your obedient Servant,

W. MARSTON CLARK,

*Diplomate in Public Health, London,
Medical Officer of Health.*

TABLE I.

Vital Statistics of whole District during 1906 and previous years.

YEAR.	BIRTHS.		TOTAL DEATHS REGISTERED IN THE DISTRICT.				TOTAL DEATHS IN PUBLIC INSTITUTIONS IN THE DISTRICT.	Deaths of Non-residents registered in Public Institutions in the District.	Deaths of Residents registered in Public Institutions beyond the District.	NET DEATHS AT ALL AGES BELONGING TO THE DISTRICT.	
	Number.	Rate.	Under 1 Year of Age.		At all Ages.					Number.	Rate.
			Number.	Rate per 1000 Births registered.	Number.	Rate.					
1896	455	24.5	58	127.4	203	8					
1897	495	26.05	82	165.6	256	8					
1898	466	28.8	69	148.06	266	11					
1899	521	26.05	60	115.1	276	11					
1900	531	25.9	82	154.4	295	16					
1901	576	27.4	68	118.0	254	15					
1902	596	27.04	83	139.0	264	8				269	12.2
1903	615	26.7	71	115.4	254	11				262	10.9
1904	723	27.8	109	150.7	319	13				324	12.4
1905	713	27.04	87	122.0	301	14				342	13.4
Averages for years 1896-1905.	569.1	26.7	76.9	135.5	268	11.5				—	—
1906	811	30.03	108	133.1	334	23				373	13.8

Area of District in acres (exclusive of an area covered by water), 2415

Total population at all ages, 21,000
Number of inhabited houses, 4224
Average number of persons per house, 4.99

At
Census.
of 1901

TABLE I.—*continued.*

I. Institutions within the District receiving sick and infirm persons from outside the District.	II. Institutions outside the District receiving sick and infirm persons from the District.	III. Other Institutions the deaths which have been distributed among the several localities in the District.
St. John's Hospital. Nightingale Nursing Home. Carpenters' Alms Houses.	Isleworth Infirmary. Richmond Hospital. Seaman's Hospital, Greenwich. Wandsworth Asylum. Brompton Hospital. St. George's Workhouse, Chelsea. Kingston Infirmary. Surrey Cottage Hospital.	

TABLE II.

Vital Statistics of separate Localities in 1906 and previous years.

NAMES OF LOCALITIES.	WHOLE DISTRICT.				SOUTH WARD.				EAST WARD.				WEST WARD.				CENTRAL WARD.			
	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.	Population esti- mated to middle of each year.	Births registered.	Deaths at all ages.	Deaths under 1 year.
1896	18500	455	203	58	4775	113	58	11	5811	126	63	17	6122	215	75	27	4282	122	53	13
1897	19000	495	256	83	4989	121	46	10	6076	149	65	19	6440	214	100	36	4495	112	58	20
1898	19500	466	266	69	5434	110	53	7	6619	158	74	22	7052	238	81	31	4895	109	54	11
1899	20000	521	276	60	5889	116	58	13	7165	165	64	14	7688	298	134	59	5258	144	68	23
1900	20500	531	295	82	5800	120	59	10	7200	130	59	8	7725	314	111	48	5278	149	72	21
1901	21000	576	249	68																
1902	22000	596	269	85																
1903	24000	615	262	71																
1904	26000	723	324	109																
1905	26000	713	301	87																
Averages of Years 1896 to 1905.	21650	569	270	77	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
1906	27000	811	373	109	6050	134	69	13	7429	180	76	16	8040	355	157	67	5481	142	71	13



TABLE III.

Cases of Infectious Disease notified during the Year 1906.

Notifiable Disease.	Cases Notified in Whole District.							Total Cases Notified in each Locality.				No. of Cases removed to Hospital. from each Locality.			
	At all Ages.	At Ages—Years.						SOUTH WARD.	EAST WARD	WEST WARD.	CENTRAL WARD.	SOUTH WARD.	EAST WARD.	WEST WARD.	CENTRAL WARD.
		Under 1.	1 to 5	5 to 15.	15 to 25.	25 to 65.	65 and upwards.								
Small-Pox ... ..	..	...	...	...	...	...	...	...	...	...	..	..	...	...	..
Cholera ... ..	...	...	...	...	...	...	..	...	...	...	...	...	...	...	..
Diphtheria	25	...	15	10	...	..	...	7	2	13	3	...	...	...	...
Membranous croup .. ...	...	...	...	...	...	..	...	...	...	...	..	...	...	...	..
Erysipelas	17	...	...	...	7	9	1	5	2	4	6	...	...	...	..
Scarlet fever	82	..	40	37	5	..	...	15	30	19	18	14	28	17	18
Typhus fever ... ..	..	...	..	..	...	...	...	...	...	...	..	...	..	...	..
Enteric fever	6	...	..	2	1	3	..	1	2	2	1	...	..	...	1
Relapsing fever ... ..	...	...	..	..	...	...	..	..	..	...	..	...	..	...	...
Continued fever ... ..	...	...	..	..	..	..	...	...	...	...	..	...	..	...	...
Puerperal fever	2	..	...	...	...	2	...	..	...	1	1	...	...	...	1
Plague .. ...	...	...	...	...	...	...	...	...	..	...	...	..	..	...	...
Totals	132	..	55	49	13	14	1	28	36	39	29	14	28	17	20

Isolation Hospitals :—Cross Deep House (for Scarlet fever) ; Mereway Hospital (for Small Pox).

TABLE IV.

Causes of, and Ages at, Death during Year, 1906.

CAUSES OF DEATH.	Deaths in or belonging to whole District at Subjoined Ages.							Deaths in or belonging to Localities (at all ages).				Total Deaths in Public Institutions in the District.
	All Ages.	Under 1 year	1 and under 5	5 and under 15	15 and under 25	25 and under 65	65 and upwards	South Ward.	East Ward.	West Ward.	Central Ward.	
Small-pox ... ..	...	...	..	...	..	...	...	...	...	...	...	...
Measles	13	4	8	1	...	...	...	3	..	10	...	1
Scarlet fever	1	...	1	...	...	...	...	...	1	...	...	1
Whooping-cough	3	2	1	...	...	..	...	2	...	1	...	..
Diphtheria and membranous croup...	2	..	2	...	...	...	...	..	1	...	1	1
Croup ... ..	...	...	...	..	..	...	...	...	...	...	...	...
Fever { Typhus ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Enteric ... ..	...	...	...	...	...	...	...	...	...	...	..	...
Other continued ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Epidemic influenza	6	1	..	1	...	4	..	1	...	3	2	1
Cholera ... ..	...	...	..	..	...	...	...	..	...	...	...	...
Plague ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Diarrhœa	45	44	...	...	...	1	..	3	7	33	2	...
Enteritis	14	..	13	1	...	...	...	...	1	11	2	...
Puerperal fever... ..	...	...	...	...	...	..	...	...	..	...	..	...
Erysipelas	1	...	..	..	1	...	...	1	...	..	..	...
Other septic diseases	1	...	..	...	1	...	...	...	...	1	...	1
Phthisis (Pulmonary Tuberculosis) ...	31	..	...	..	7	23	1	7	7	10	7	1
Other tubercular diseases	11	3	5	1	1	1	...	1	2	5	3	1
Cancer, malignant disease	23	..	...	...	1	15	7	3	5	8	7	1
Bronchitis	12	1	..	...	1	3	7	2	3	4	3	1
Pneumonia	4	...	2	1	...	1	...	1	...	2	1	...
Pleurisy ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Other diseases of Respiratory Organs ...	9	2	4	...	...	3	...	1	3	3	2	..
Alcoholism {	8	..	...	...	...	6	2	1	4	3	..	...
Cirrhosis of liver { ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Venereal diseases ... ..	...	...	...	...	...	...	...	...	...	...	...	...
Premature birth	16	16	...	...	...	..	...	3	4	6	3	...
Diseases and accidents of parturition	2	...	...	...	...	2	...	...	..	2	...	...
Heart diseases	19	..	2	2	1	11	3	7	3	6	3	1
Accidents	20	4	...	2	2	8	4	3	4	9	4	2
Suicides	8	...	...	..	..	8	...	2	..	3	3	...
All other causes	124	32	9	2	3	26	52	28	31	37	28	11
All causes	373	109	47	11	18	112	76	69	76	157	71	23

TABLE V.

Infantile Mortality during the Year 1906.

CAUSE OF DEATH.				Under 1 Week.	1-2 Weeks.	2-3 Weeks.	3-4 Weeks.	Total under 1 Month.	1-2 Months.	2-3 Months.	3-4 Months.	4-5 Months.	5-6 Months.	6-7 Months.	7-8 Months.	8-9 Months.	9-10 Months.	10-11 Months.	11-12 Months.	Total Deaths under One Year.
All Causes.	Certified	...	...	13	2	5	5	25	15	9	6	9	8	4	11	10	5	5	1	108
	Uncertified	...	...	1	...	...	...	1	..	..	..	..	..	..	..	..	..	..	..	1
Common Infectious Diseases.	Small-pox	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Chicken-pox	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Measles	...	...	..	..	..	..	..	..	..	..	..	..	..	1	1	..	2	..	4
	Scarlet Fever	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Diphtheria: Croup	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Whooping Cough	..	..	..	..	..	..	..	1	..	..	1	..	..	..	..	..	..	..	2
Diarrhoea Diseases.	Diarrhoea, all forms	...	...	..	..	..	..	..	5	1	4	7	7	2	6	7	2	2	1	44
	Enteritis	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	(not Tuberculous)	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Gastritis, Gastro-intestinal Catarrh	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wasting Diseases.	Premature Birth	...	...	9	..	2	4	15	1	..	..	..	..	..	..	..	..	..	..	16
	Congenital Defects	...	...	1	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	2
	Injury at Birth	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Want of Breast-milk	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Atrophy, Debility, Marasmus	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tuberculous Diseases.	Tuberculous Meningitis	...	...	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
	Tuberculous Peritonitis	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Tabes Mesenterica	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Other Tuberculous Diseases	...	...	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	3
	Erysipelas	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Syphilis	...	...	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	1
	Rickets	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Meningitis	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	(not Tuberculous)	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Convulsions	..	...	1	..	1	..	2	..	..	..	..	..	..	..	..	..	1	..	3
	Bronchitis	...	...	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	1
	Laryngitis	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Pneumonia	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	Suffocation, overlaying	...	...	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..	3
	Other Causes	...	...	3	1	2	1	7	5	6	..	1	1	2	2	2	3	..	..	29
				14	2	5	5	26	15	9	6	9	8	4	11	10	5	5	1	109

Deaths from all Causes at all Ages, 373.

Population, 27,000.

TABLE I.

COUNTY OF MIDDLESEX--SANITARY WORK, 1906.

[illegible]



TABLE II.

COUNTY OF MIDDLESEX.—SANITARY WORK, 1906.

NAME OF SANITARY DISTRICT : TWICKENHAM.	Laundries.		Bakehouses.		Slaughter- houses.		Cow-sheds.		Dairies and Milk-shops.		Unsound Food.			Adulterated Food.		Offensive Trades.		Water Supply and Water Service.								
	Number in District.	Contraventions of Factory Acts.	Number in District.	Contraventions of Factory Acts.	Number on Register.	Contraventions of Bye-laws.	Number on Register.	Contraventions of Regulations.	Number on Register.	Contraventions of Regulations.	Animals seized.	Articles or parcels seized.	Articles or Parcels surrendered.	Samples taken.	Found adulterated.	Number of premises in District.	Contraventions of Bye-laws.	Wells.			Percentage of Houses supplied from Public Water Service.	Cisterns.			Draw-Taps removed from Cisterns to Mains.	Percentage of Houses supplied on Constant System.
																		New Sunk.	Cleansed, Repaired, &c.	Closed as Polluted.		New, Provided.	Cleansed, Repaired, Covered,&c.	Overflow Pipes Disconnected from Drains.		
	48	2	19	—	10	—	6	—	40	—	—	—	Numerous.	—	—	—	—	—	—	1	99.5	21	83	—	1	100

TABLE III.

COUNTY OF MIDDLESEX.—SANITARY WORK, 1906.

NAME OF SANITARY DISTRICT: TWICKENHAM.	Drainage and Sewerage.													Disinfection.			Dust.		Sundry Nuisances Abated.								
	Water Closets.			Percentage of Houses provided with Water Closets.	Drains.						Reconstructed.	Cesspools.		Percentage of Houses Draining into Sewers.	Rooms fumigated.	Rooms stripped and cleansed.	Articles disinfected or destroyed.	New bins provided.	Periodical frequency of dust removal.	Number of complaints of non- removal received.	Overcrowding.	Smoke.	Accumulations of refuse.	Foul ditches, ponds, &c., and stagnant water.	Foul pigs and other animals.	Dampness.	Other nuisances.
	New, Constructed.	Number of Water Closets sub- stituted for Dry Receptacles.	Repaired, Supplied with Water, or otherwise Improved.		Examined, Tested, Exposed, &c.	Unstopped, Repaired, Trapped, &c.	Waste Pipes, Rain Water Pipes, Disconnected, Repaired, &c.	Soil Pipes and Drains Ventilated.	Disconnecting Traps or Chambers inserted.	Rendered Impervious. Emptied, Cleansed, &c.		Abolished, and Drain con- nected to Sewer.															
	18	—	120	99·5	25	132	48	26	15	21	—	1	99·5	120	19	Numerous.	73	Weekly.	61	15	3	30	6	9	61	182	

